

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

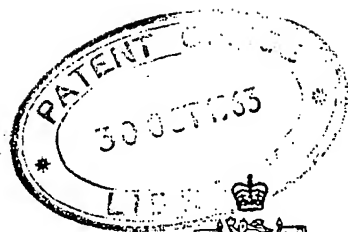
Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**



No. 671,730



ISSUED Oct. 8, 1963  
CLASS 240-52

# CANADIAN PATENT

ILLUMINATED SAFETY CANE

Heinrich Zimmer, Oakville, Ontario, Canada

APPLICATION No. 864,446  
FILED Dec. 13, 1962  
PRIORITY DATE

No. OF CLAIMS 5

DISTRIBUTED BY THE PATENT OFFICE,  
DEPARTMENT OF THE SECRETARY OF STATE, OTTAWA.  
SOS-400-5-1 (REV. 6, 62)

This invention relates generally to safety accessories for pedestrians and more particularly to a firmly illuminated walking stick having wide application to the general public but more specific application to the physically handicapped, the elderly, the blind or those with impaired vision.

10 Provision of walking sticks designed to identify the user's physical disability, blindness or impaired vision to other pedestrians has heretofore taken the form of a conventional stick or case painted white. While walking sticks so treated are quite adequate for use during hours of daylight, their usefulness becomes somewhat limited at dusk and during darkness or when fog conditions prevail.

Accordingly, it is a prime object of the instant invention to provide an improved walking stick for use by the blind and handicapped both during daytime and nighttime, the walking stick having means incorporated whereby it may be selectively illuminated by the user.

20 Another important object of my invention resides in the provision of such a walking stick referred to herein-after as an illuminated stick which is constructed from a translucent plastic material, the body of the stick being hollow and adapted to retain therein illuminating means.

Yet a further object of my invention provides an illuminated stick having reflector means therein, such means producing high-lit areas at a predetermined location upon the stick.

30 Still another object of the present invention proposes an illuminated stick having selective switching means incorporated within the handle portion, such switching means



having easily identified positions and being easily operated by the thumb or finger of the user.

Other objects of this invention provide an illuminated stick which is strong, durable, and relatively inexpensive to manufacture.

These and further pertinent objects and features of this invention will become more readily apparent from the following detailed description of parts and when taken in conjunction with the accompanying drawings in which: -

10

Fig. 1 is a broken, side elevation of an illuminated stick embodying the instant invention.

Fig. 2 is a broken sectional side elevation of the invention as illustrated in Fig. 1 taken on the line 2 - 2.

Fig. 3 is a detailed sectional view of the reflector assembly housed in the end of the stick body.

20

Referring now to Figs. 1 and 2 an illuminated stick indicated generally by the arrow 10 includes an elongated tubular body 11 having an upper end 12 and a lower end 13. Tubular body 11 is formed from a suitable plastic material preferably white in colour and having the characteristics of translucency. A plurality of longitudinal ribs 11a are formed throughout the length of body 11 thereby imparting strength and rigidity thereto.

A circular, internal flange 14, integral with body 11, is located within upper end 12, its inner peripheral edge having a screw thread 14a formed therein and ends 12 and 13 of body 11 each having externally threaded portions 12a and 13a respectively.

A ferrule 15, having an internally threaded section 15a of increased diameter is adapted to be threadably attached to end 12 of body 11, being firmly retained thereon by means of a lock washer 16 located between the end of threaded portion 12a and shoulders 15b of ferrule 15.

Handle means 17 integral with ferrule 15 project substantially perpendicularly outwardly therefrom, both handle 17 and ferrule 15 being formed from the same material as body 11.

10

Illuminating means 18 include a cylindrical battery housing 18a having a bulb holder 18b at one end thereof, a bulb 18c threadably retained in holder 18b and switch means 19 at the opposite end.

It will be readily apparent that the dry cell pocket torch type batteries may be used with illuminating means 18, housing 18a being adapted to hold a plurality of such batteries in series contact and allowing for the easy replacement of spent batteries when necessary.

20

Switch means 19 should be such as to operate on the push contact principle, having a positive "on" position easily distinguishable to a blind person and identifiable by touch.

An externally threaded portion 18d formed upon housing 18 is adapted to be threadably received within flange 14 of body 11, an outwardly projecting circular flange 18e located circumferentially on housing 18a immediately above threaded portion 18d preventing housing 18a from being screwed beyond the limits of threaded portion 18d.

Thus, in assembly, illuminating means 18 is

ins rt d longitudinally within body 11 and threadably r tain-  
d within flange 14 th reof.

Referring now to Figs. 1, 2 and 3 a reflector unit  
20 housed in end 13 of body 11 includes a shallow, conical  
reflector 21 having its upper surface 21a hightly polished  
and located with its apex 21b uppermost and centrally with-  
in end 13, its peripheral edge 21c conforming to the outside  
diameter of body 11 and being seated thereon within a co-  
operable counter sunk section 11b. A grommit 22, thread-  
ably retained on end 13 of body 11 serves as a strike point  
for illuminated stick 10 and also secures reflector 21 in  
position.

Reflector 21 may be formed from any suitable ma-  
terial such as polished aluminum or the like and grommit 22  
should preferably be of rubber or other suitably resilient  
material.

In operation, switch 19 is moved by thumb or fin-  
ger action to the "on" position thus lighting bulb 18c.  
Light from bulb 18c will defuse through the transluscent  
walls of body 11 thus illuminating stick 10 throughout its  
length. Also, light from bulb 18c will strike conical re-  
flector 21 (as illustrated by arrows A-A in Fig. 3) being  
deflected from its polished upper surface 21a and concen-  
trating a band of light upon section 22 of body 11, thus  
further illuminating stick 10 and making it clearly visible  
in the dark.

Although a conical reflector has been described in  
this embodiment it is not intended to limit reflector means  
21 to a conical configuration, either flat or curved reflect-  
ors suitably angled being anticipated, contingent upon any  
desir d light r flection.

671730

- 6 -

The general design of the individual parts of the invention as explained above may be varied according to requirements in regards to manufacture and production thereof, while still remaining within the spirit and principle of the invention, without prejudicing the novelty thereof.

THE EMBODIMENTS OF THIS INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. An illuminated walking stick including an elongated, hollow body member of translucent material, said body member having longitudinal ribbing formed therein; incandescent light means for illuminating entire length of said body member; intermittent on and off selective switching means for actuating said illuminating means; reflector means within said body member; and handle means, a light deflector means at base of said body.
2. An illuminated walking stick as defined in claim 1 in which said illuminating means comprise a housing for at least one dry cell battery and an electric bulb.
3. An illuminated walking stick as defined in claim 1 in which said selective switching means is of the push-on contact type, having a positive "on" position, immediately identifiable by touch said switching means located adjacent to thumb position on the handle and directly over the incandescent light means.
4. An illuminated walking stick as defined in claim 1 in which said deflector means comprise a polished conical deflector retained within the lower end of said body member by means of a threadably attached grommit.
5. An illuminating walking stick as defined in claim 1 in which said handle means consists of an outwardly extending member threadably attached to the upper end of said body member.



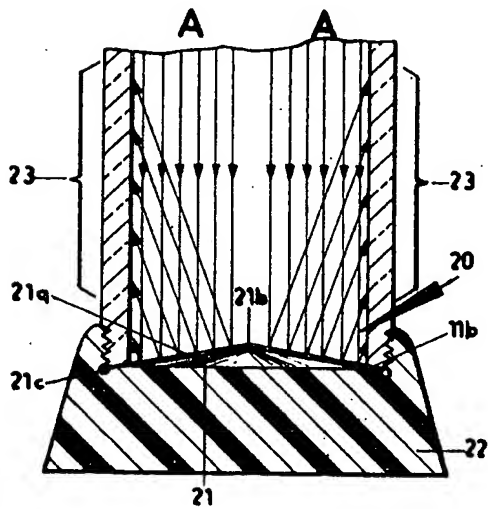
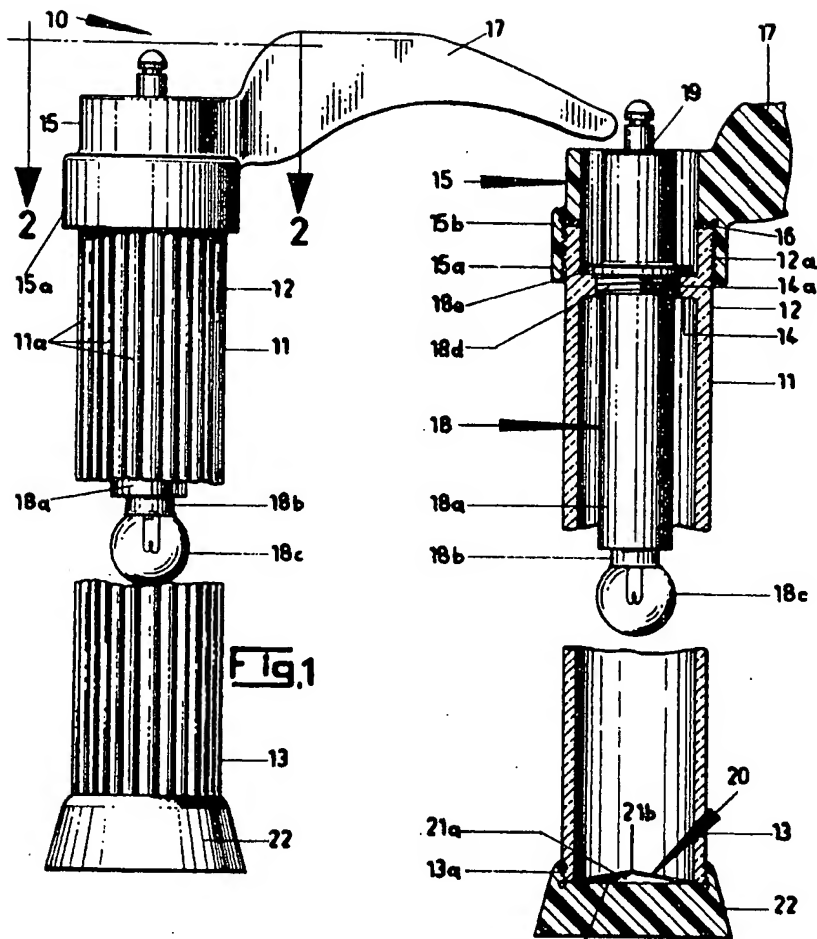


Fig. 3.

*Leinisch Zimmer*